

APPLICATION FOR FINANCIAL ASSISTANCE
Revised 4/99

IMPORTANT: Please consult the "Instructions for Completing the Project Application" for assistance in completion of this form.

SUBDIVISION: CITY OF CINCINNATI **CODE#** 061-15000

DISTRICT NUMBER: 2 **COUNTY:** Hamilton **DATE** 9 / 10 / 2007

CONTACT: John Brazina **PHONE # (513)** 352-6249

(THE PROJECT CONTACT PERSON SHOULD BE THE INDIVIDUAL WHO WILL BE AVAILABLE ON A DAY-TO-DAY BASIS DURING THE APPLICATION REVIEW AND SELECTION PROCESS AND WHO CAN BEST ANSWER OR COORDINATE THE RESPONSE TO QUESTIONS)

FAX (513) 352-1581 **E-MAIL** john.brazina@cincinnati-oh.gov

PROJECT NAME: Vine Street – Nixon to Erkenbrecher

SUBDIVISION TYPE

(Check Only 1)

- ☐ 1. County
☒ 2. City
☐ 3. Township
☐ 4. Village
☐ 5. Water/Sanitary District
(Section 6119 O.R.C.)

FUNDING TYPE REQUESTED

(Check All Requested & Enter Amount)

- ☒ 1. Grant \$ 1,305,000
☐ 2. Loan \$ _____
☐ 3. Loan Assistance \$ _____

PROJECT TYPE

(Check Largest Component)

- ☒ 1. Road
☐ 2. Bridge/Culvert
☐ 3. Water Supply
☐ 4. Wastewater
☐ 5. Solid Waste
☐ 6. Stormwater

TOTAL PROJECT COST: \$ 1,450,000

FUNDING REQUESTED: \$ 1,305,000

DISTRICT RECOMMENDATION

To be completed by the District Committee ONLY

GRANT: \$ 1,305,000

LOAN ASSISTANCE: \$ _____

SCIP LOAN: \$ _____ **RATE:** _____ % **TERM:** _____ yrs.

RLP LOAN: \$ _____ **RATE:** _____ % **TERM:** _____ yrs.

(Check Only 1)

☐ State Capital Improvement Program

☐ Small Government Program

☒ Local Transportation Improvements Program

2007 SEP 21 PM 1:09
HAMILTON COUNTY
ENGINEER'S
PERMIT DEPARTMENT

FOR OPWC USE ONLY

PROJECT NUMBER: C _____ / C _____

Local Participation _____ %

OPWC Participation _____ %

Project Release Date: ____ / ____ / ____

OPWC Approval: _____

APPROVED FUNDING: \$ _____

Loan Interest Rate: _____ %

Loan Term: _____ years

Maturity Date: ____ / ____ / ____

Date Approved: ____ / ____ / ____

SCIP Loan _____ **RLP Loan** _____

1.0 PROJECT FINANCIAL INFORMATION

1.1 PROJECT ESTIMATED COSTS:
(Round to Nearest Dollar)

TOTAL DOLLARS

**FORCE ACCOUNT
DOLLARS**

a.) Basic Engineering Services:

\$.00

Preliminary Design \$.00

Final Design \$.00

Bidding \$.00

Construction Phase \$.00

Additional Engineering Services

\$.00

*Identify services and costs below.

b.) Acquisition Expenses:

Land and/or Right-of-Way

\$.00

c.) Construction Costs:

\$ 1,300,000.00

d.) Equipment Purchased Directly:

\$.00

e.) Permits, Advertising, Legal:

(Or Interest Costs for Loan Assistance
Applications Only)

\$.00

f.) Construction Contingencies:

\$ 150,000.00

g.) TOTAL ESTIMATED COSTS:

\$ 1,450,000.00

*List Additional Engineering Services here:
Service:

Cost:

1.2 PROJECT FINANCIAL RESOURCES:

(Round to Nearest Dollar and Percent)

	DOLLARS	%
a.) Local In-Kind Contributions	\$ <u> .00</u>	
b.) Local Revenues	\$ <u> 145,000.00</u>	<u> 10</u>
c.) Other Public Revenues	\$ <u> .00</u>	
ODOT	\$ <u> .00</u>	
Rural Development	\$ <u> .00</u>	
OEPA	\$ <u> .00</u>	
OWDA	\$ <u> .00</u>	
CDBG	\$ <u> .00</u>	
OTHER _____	\$ <u> .00</u>	
SUBTOTAL LOCAL RESOURCES:	\$ <u> 145,000.00</u>	<u> 10</u>
d.) OPWC Funds		
1. Grant	\$ <u> 1,305,000.00</u>	<u> 90</u>
2. Loan	\$ <u> .00</u>	
3. Loan Assistance	\$ <u> .00</u>	
SUBTOTAL OPWC RESOURCES:	\$ <u> 1,305,000.00</u>	<u> 90</u>
e.) TOTAL FINANCIAL RESOURCES:	\$ <u> 1,450,000.00</u>	<u> 100%</u>

1.3 AVAILABILITY OF LOCAL FUNDS:

Attach a statement signed by the Chief Financial Officer listed in section 5.2 certifying all local share funds required for the project will be available on or before the earliest date listed in the Project Schedule section.

ODOT PID# _____

Sale Date:

STATUS: (Check one)

Traditional

Local Planning Agency (LPA)

State Infrastructure Bank

2.0 PROJECT INFORMATION

If project is multi-jurisdictional, information must be consolidated in this section.

2.1 PROJECT NAME: Vine Street – Nixon to Erkenbrecher

2.2 BRIEF PROJECT DESCRIPTION - (Sections A through C):

A: SPECIFIC LOCATION:

From the intersection of Vine Street and Nixon Street to the intersection of Vine Street and Erkenbrecher Avenue in the community of Clifton. (See attached map)

PROJECT ZIP CODE: 45220

B: PROJECT COMPONENTS:

Improvements include widening Vine Street from 4 lanes (36' wide) to 5 lanes (58' wide) with a wide curb lane for bicycle travel and realign the Erkenbrecher and Vine intersection. Construct a new concrete base with asphalt surface, curbs, sidewalk, traffic signal, and lighting.

C: PHYSICAL DIMENSIONS / CHARACTERISTICS:

5 lanes, 58 feet in width and 2200 feet in length.

D: DESIGN SERVICE CAPACITY:

Detail current service capacity vs. proposed service level.

The current LOS is C. The LOS in 20 years with NO improvement is F.

The LOS in 20 years with the improvement is C.

Road or Bridge: Current ADT 24,106 Year: 2000 Projected ADT: 35,820 Year: 2020

Water/Wastewater: Based on monthly usage of 7,756 gallons per household, attach current rate ordinance. Current Residential Rate: \$_____ Proposed Rate: \$_____

Stormwater: Number of households served: _____

2.3 USEFUL LIFE / COST ESTIMATE: Project Useful Life: 20 Years.

Attach Registered Professional Engineer's statement, with original seal and signature confirming the project's useful life indicated above and estimated cost.

3.0 REPAIR/REPLACEMENT or NEW/EXPANSION:

TOTAL PORTION OF PROJECT REPAIR/REPLACEMENT \$ 725,000.00

TOTAL PORTION OF PROJECT NEW/EXPANSION \$ 725,000.00

4.0 PROJECT SCHEDULE: *

	BEGIN DATE	END DATE
4.1 Engineering/Design:	<u>1 / 1 / 06</u>	<u>9 / 1 / 07</u>
4.2 Bid Advertisement and Award:	<u>9 / 1 / 07</u>	<u>12 / 1 / 07</u>
4.3 Construction:	<u>12 / 31 / 07</u>	<u>11 / 1 / 09</u>
4.4 Right-of-Way/Land Acquisition:	<u>1 / 1 / 07</u>	<u>12 / 1 / 07</u>

* Failure to meet project schedule may result in termination of agreement for approved projects. Modification of dates must be requested in writing by the CEO of record and approved by the commission once the Project Agreement has been executed. The project schedule should be planned around receiving a Project Agreement on or about July 1st.

5.0 APPLICANT INFORMATION:

- 5.1 CHIEF EXECUTIVE OFFICER Scott Stiles
TITLE Assistant City Manager
STREET Room 104, City Hall
 801 Plum Street
CITY/ZIP Cincinnati, Ohio 45202
PHONE (513) 352-3475
FAX (513) 352-2458
E-MAIL scott.stiles@cincinnati-oh.gov
- 5.2 CHIEF FINANCIAL OFFICER Joe Gray
TITLE Acting Director of Finance
STREET Room 250, City Hall
 801 Plum Street
CITY/ZIP Cincinnati, Ohio 45202
PHONE (513) 352-5372
FAX (513) 352-2370
E-MAIL joe.gray@cincinnati-oh.gov
- 5.3 PROJECT MANAGER Don Gindling, PE
TITLE Principal Public Works Construction Engineer
STREET Room 450, City Hall
 801 Plum Street
CITY/ZIP Cincinnati, Ohio 45202
PHONE (513) 352-1518
FAX (513) 352-1581
E-MAIL don.gindling@cincinnati-oh.gov

Changes in Project Officials must be submitted in writing from the CEO.

6.0 ATTACHMENTS/COMPLETENESS REVIEW:

Confirm in the blocks [] below that each item listed is attached.

- [] A certified copy of the legislation by the governing body of the applicant authorizing a designated official to sign and submit this application and execute contracts. This individual should sign under 7.0, Applicant Certification, below.
- [X] A certification signed by the applicant's chief financial officer stating all local share funds required for the project will be available on or before the dates listed in the Project Schedule section. If the application involves a request for loan (RLP or SCIP), a certification signed by the CFO which identifies a specific revenue source for repaying the loan also must be attached. Both certifications can be accomplished in the same letter.
- [X] A registered professional engineer's detailed cost estimate and useful life statement, as required in 164-1-13, 164-1-14, and 164-1-16 of the Ohio Administrative Code. Estimates shall contain an engineer's original seal or stamp and signature.
- [] A cooperation agreement (if the project involves more than one subdivision or district) which identifies the fiscal and administrative responsibilities of each participant.
- [] Projects which include new and expansion components and potentially affect productive farmland should include a statement evaluating the potential impact. If there is a potential impact, the Governor's Executive Order 98-VII and the OPWC Farmland Preservation Review Advisory apply.
- [] Capital Improvements Report: (Required by O.R.C. Chapter 164.06 on standard form)
- [X] Supporting Documentation: Materials such as additional project description, photographs, economic impact (temporary and/or full time jobs likely to be created as a result of the project), accident reports, impact on school zones, and other information to assist your district committee in ranking your project. Be sure to include supplements, which may be required by your *local* District Public Works Integrating Committee.

7.0 APPLICANT CERTIFICATION:

The undersigned certifies that: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission; (2) to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving Buy Ohio and prevailing wages.

Applicant certifies that physical construction on the project as defined in the application has NOT begun, and will not begin until a Project Agreement on this project has been executed with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding of the project.

Scott Stiles, Assistant City Manager

Certifying Representative (Type or Print Name and Title)

Scott Stiles 9/14/07
Signature/Date Signed

District Two

Additional Support Information

ADDITIONAL SUPPORT INFORMATION

For Program Year 2008 (July 1, 2008 through June 30, 2009), jurisdictions shall provide the following support information to help determine which projects will be funded. Information on this form must be accurate, and where called for, based on sound engineering principles. Documentation to substantiate the individual items, as noted, is required. The applicant should also use the rating system and its' addendum as a guide. The examples listed in this addendum are not a complete list, but only a small sampling of situations that may be relevant to a given project.

IF YOU ARE APPLYING FOR A GRANT, WILL YOU BE WILLING TO ACCEPT A LOAN IF ASKED BY THE DISTRICT? _____ YES X NO (ANSWER REQUIRED)

Note: Answering "Yes" will not increase your score and answering "NO" will not decrease your score.

1) What is the physical condition of the existing infrastructure that is to be replaced or repaired?

Give a statement of the nature of the deficient conditions of the present facility exclusive of capacity, serviceability, health and/or safety issues. If known, give the approximate age of the infrastructure to be replaced, repaired, or expanded. Use documentation (if possible) to support your statement. Documentation may include (but is not limited to): ODOT BR86 reports, pavement management condition reports, televised underground system reports, age inventory reports, maintenance records, etc., and will only be considered if included in the original application. Examples of deficiencies include: structural condition; substandard design elements such as widths, grades, curves, sight distances, drainage structures, etc.

Geometric design:

Deficiencies: Vine Street is a principal arterial and is 36' wide, striped for 4-9' lanes. These 9' lanes are substandard. The Vine Street and Erkenbrecher Intersection has poor sight distance and poor horizontal geometry. The intersection is large and wide with multiple islands, which creates a confusing driving situation for the motoring public.

Solution: The project will widen Vine Street to 58', which will allow 2-14' curb lanes, 2-10' through lanes, and 1-10 turn lane, realign the Vine and Erkenbrecher intersection to a 90 degree angle which will improve the sight distance, eliminate the islands and reduce the confusion to the motorists.

Pavement:

Deficiencies: The roadway has an asphalt surface that is beginning to show signs of fatigue. The pavement is warping and shoving in the wheel paths showing signs of wear especially at the bus stops where replacement with full depth concrete pavement is required to prevent the shoving from recurring. The current pavement condition is fair with a PCI rating of 61 out of 100. Over the past two years, there have been 20 pothole and pavement repair requests. This information was obtained from the Cincinnati Customer Service Response Database (CSR). The documentation is attached. This attached information documents the pavement failures and the poor ride quality.

Solution: The project will remove the aging pavement base and asphalt surface and fully reconstruct with concrete base and asphalt surface course to provide a smooth driving surface.

Signals:

Deficiencies: The two signals along Vine Street have reached the end of their service life. The City of Cincinnati establishes twenty years as service life for signal equipment. There have been 41 customer service requests from the CSR database (see attached) in the past two years. This information documents that the existing equipment is in dire need of repair/replacement.

Solution: The signals throughout the project will be rebuilt with the latest technology in signal equipment, which will provide us with greater efficiency through this corridor.

2) How important is the project to the safety of the Public and the citizens of the District and/or service area?

Give a statement of the projects effect on the safety of the service area. The design of the project is intended to reduce existing accident rate, promote safer conditions, and reduce the danger of risk, liability or injury. (Typical examples may include the effects of the completed project on accident rates, emergency response time, fire protection, and highway capacity.) Please be specific and provide documentation if necessary to substantiate the data. The applicant must demonstrate the type of problems that exist, the frequency and severity of the problems and the method of correction.

Accidents:

Problems: The Vine Street corridor has had 74 accidents the past two years. See attached documentation. The rate is 10 crashes/million vehicle miles/year/mile, which is 40% above the city average of 7. 33% of the accidents were parked vehicle/sideswipe accidents caused by the narrow lane widths of Vine Street. Nearly 50% of the accidents were rear end accidents. These accidents were caused by sudden stops, which can be attributed to no left turn lane and the high volume of traffic on Vine Street. Currently, the LOS is C but with no street improvement the LOS will degrade to an F in 20 years.

Solution: Widening Vine Street from 36' to 58' will reduce the parked vehicle/sideswipe accidents by allowing more width to travel and the left turn lane will reduce the rear end accidents by reducing the number of conflict points by pulling left turning vehicles out of the through lanes.

Capacity:

Problems: There are two signalized intersections completely within the project limits. The Vine Street/Erkenbrecher Avenue intersection is heavily utilized by zoo traffic and includes a pedestrian entrance into the Zoo. The current Level of Service (LOS) for this intersection is C. The projected LOS, if there are no improvements, will diminish to a LOS F in twenty years. The second signalized intersection within the project limits is the Vine Street/VA Hospital drive. This serves as the main entrance into the VA Hospital. Attached are Synchro outputs for the two signalized intersections on Vine Street.

Solution: With the proposed improvements to Vine Street, the LOS at the signalized intersection of Vine and Erkenbrecher in twenty years would be LOS C instead of a LOS F. At the signalized intersection of Vine and VA Hospital, the existing LOS A will remain a LOS A in the PM peak but improve the AM peak from a LOS B to LOS A after the project is complete. The Uptown Transportation study, which is sponsored by the City of Cincinnati, ODOT, OKI, UC and the Uptown Consortium, has a traffic signal system evaluation. The performance of the system shows a reduction in vehicle delay of 25% with the improvement to Martin Luther King Jr (MLK) Drive assuming a LOS C for the Vine Street corridor. The MLK Drive improvements are currently under construction meeting the project at Nixon (phase 2 of the Vine Street Corridor). Therefore, the improvements to Vine Street are critical to the overall success of the traffic signal system in the Uptown area. Please see attached information.

3) How important is the project to the health of the Public and the citizens of the District and/or service area?

Give a statement of the projects effect on the health of the service area. The design of the project will improve the overall condition of the facility so as to reduce or eliminate potential for disease, or correct concerns regarding the environmental health of the area. (Typical examples may include the effects of the completed project by improving or adding storm drainage or sanitary facilities, replacing lead jointed water lines, etc.). Please be specific and provide documentation if necessary to substantiate the data. The applicant must demonstrate the type of problems that exist, the frequency and severity of the problems and the method of correction.

The project will improve the storm drainage and pavement runoff.

4) Does the project help meet the infrastructure repair and replacement needs of the applying jurisdiction?

The jurisdiction must submit a listing in priority order of the projects for which it is applying. Points will be awarded on the basis of most to least importance.

Priority 1 Clifton/West Clifton Avenue Improvements

Priority 2 Spring Grove/Clifton Avenue Improvements

Priority 3 Elberon Avenue Landslide Improvements

Priority 4 Colerain/Westfork/Virginia Improvements

Priority 5 Hamilton Avenue Phase 2 Improvements

5) To what extent will the user fee funded agency be participating in the funding of the project?

(example: rates for water or sewer, frontage assessments, etc.).

Minor casting adjustments for CWW will be included with the roadway construction.

6) Economic Growth – How will the completed project enhance economic growth

Give a statement of the projects effect on the economic growth of the service area (be specific).

The proposed project will have large effect on economic growth. This project will allow better traffic flow through the uptown region. The project is a major part of the Uptown Crossing Plan. See attached sheets. The plan shows a new grid type development planned for the west side of Vine Street from Nixon to Shields and the new Zoo parking lot on Vine Street from Shields to Erkenbrecher with a Pedestrian bridge over Vine Street from the parking lot to the Zoo entrance. The project is also part of Uptown Transportation Study Recommended Corridor Projects. See attached sheets. The Vine Street is one of thirteen projects that are recommended. Many of the projects are finished, under construction or already funded. The Vine Street corridor improvements will allow better access to Children's Hospital, VA Hospital, University Hospital, and Cincinnati Zoo for visitors and employees. This uptown area is the largest employment area outside of Downtown Cincinnati. Please see attached letter from the Cincinnati Zoo & Botanical Garden concerning job creation and the ability to permit more development resulting from the improvements to Vine Street.

7) Matching Funds - LOCAL

The information regarding local matching funds is to be filed by the applicant in Section 1.2 (b) of the Ohio Public Works Association's "Application For Financial Assistance" form.

8) Matching Funds - OTHER

The information regarding local matching funds is to be filed by the applicant in Section 1.2 (c) of the Ohio Public Works Association's "Application For Financial Assistance" form. If MRF funds are being used for matching funds, the

MRF application must have been filed by Friday, August 31, 2007 for this project with the Hamilton County Engineer's Office. List below all "other" funding the source(s).

Municipal Road Fund – \$290,000

9) Will the project alleviate serious capacity problems or respond to the future level of service needs of the district?

Describe how the proposed project will alleviate serious capacity problems (be specific).

Yes, the project will alleviate capacity problems by maintaining a LOS C at the Vine and Erkenbrecher Intersection and a LOS A in the PM peak at the Vine and VA hospital intersection, the LOS will improve in the AM peak from LOS B to LOS A for the future volume at the Vine and VA hospital intersection, providing a center turn lane for left turns, improving the roadway cross section and the pedestrian facilities. See the attached Synchro outputs for the capacity analysis.

For roadway betterment projects, provide the existing and proposed Level of Service (LOS) of the facility using the methodology outlined within AASHTO'S "Geometric Design of Highways and Streets" and the 1985 Highway Capacity Manual.

Existing LOS C

Proposed LOS C

If the proposed design year LOS is not "C" or better, explain why LOS "C" cannot be achieved.

LOS C can be achieved with the project.

10) If SCIP/LTIP funds were granted, when would the construction contract be awarded?

If SCIP/LTIP funds are awarded, how soon after receiving the Project Agreement from OPWC (tentatively set for July 1 of the year following the deadline for applications) would the project be under contract? The Support Staff will review status reports of previous projects to help judge the accuracy of a jurisdiction's anticipated project schedule.

Number of months 6

a.) Are preliminary plans or engineering completed? Yes X No _____ N/A _____

b.) Are detailed construction plans completed? Yes _____ No X N/A _____

c.) Are all utility coordination's completed? Yes _____ No X N/A _____

d.) Are all right-of-way and easements acquired (if applicable)? Yes _____ No X N/A _____

If no, how many parcels needed for project? 3 Of these, how many are: Takes _____

Temporary _____

Permanent 3

For any parcels not yet acquired, explain the status of the ROW acquisition process for this project.

The acquisition process has begun and will be finished by the time the project is under contract for construction.

e.) Give an estimate of time needed to complete any item above not yet completed. 12 Months.

11) Does the infrastructure have regional impact?

Give a brief statement concerning the regional significance of the infrastructure to be replaced, repaired, or expanded.
Vine Street provides access to the largest employment areas in Cincinnati outside of downtown.
Employers consist of University of Cincinnati, the Zoo, the EPA, and all the Hospitals i.e.
Children's, University, Shriners and the UC Medical School. Access to I-75 via Martin Luther King
and Mitchell are from Vine Street. This is a major SORTA route. The project is in the Uptown
Transportation Study and will spur new development per the Uptown Crossing Plan.

12) What is the overall economic health of the jurisdiction?

The District 2 Integrating Committee predetermines the jurisdiction's economic health. The economic health of a jurisdiction may periodically be adjusted when census and other budgetary data are updated.

13) Has any formal action by a federal, state, or local government agency resulted in a partial or complete ban of the usage or expansion of the usage for the involved infrastructure?

Describe what formal action has been taken which resulted in a ban of the use of or expansion of use for the involved infrastructure? Typical examples include weight limits, truck restrictions, and moratoriums or limitations on issuance of building permits, etc. The ban must have been caused by a structural or operational problem to be considered valid. Submission of a copy of the approved legislation would be helpful.

No Ban

Will the ban be removed after the project is completed? Yes _____ No _____ N/A X

14) What is the total number of existing daily users that will benefit as a result of the proposed project?

For roads and bridges, multiply current Average Daily Traffic (ADT) by 1.20. For inclusion of public transit, submit documentation substantiating the count. Where the facility currently has any restrictions or is partially closed, use documented traffic counts prior to the restriction. For storm sewers, sanitary sewers, water lines, and other related facilities, multiply the number of households in the service area by 4. User information must be documented and certified by a professional engineer or the jurisdictions' C.E.O.

Traffic: ADT 24,106 X 1.20 = 28,927 Users

Water/Sewer: Homes _____ X 4.00 = _____ Users

15) Has the jurisdiction enacted the optional \$5 license plate fee, an infrastructure levy, a user fee, or dedicated tax for the pertinent infrastructure?

The applying jurisdiction shall list what type of fees, levies or taxes they have dedicated toward the type of infrastructure being applied for. (Check all that apply)

Optional \$5.00 License Tax X

Infrastructure Levy X Specify type dedicated portion of City earnings tax

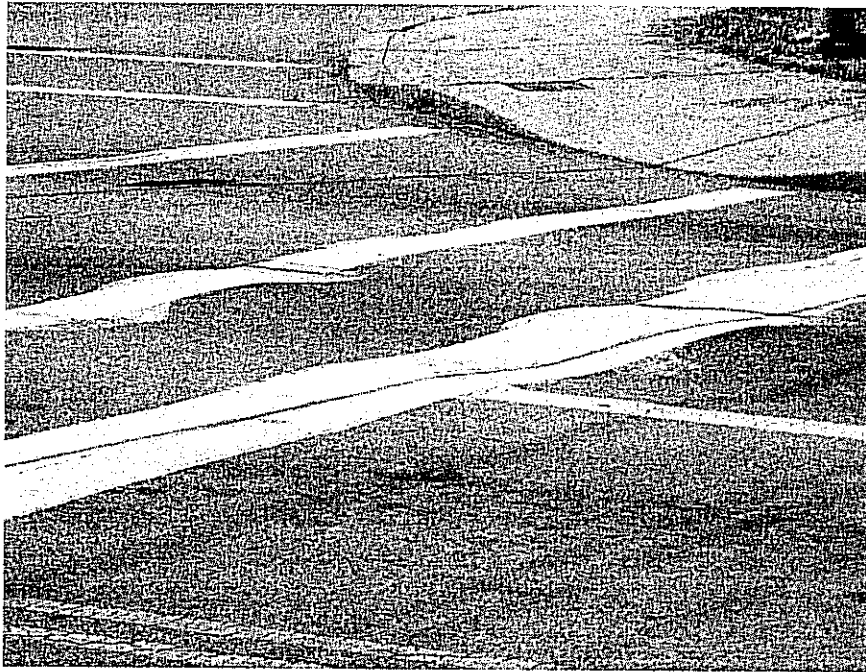
Facility Users Fee _____ Specify type _____

Dedicated Tax _____ Specify type _____

Other Fee, Levy or Tax _____ Specify type _____

Project Pictures

VINE STREET



Road has buckling and ruts.

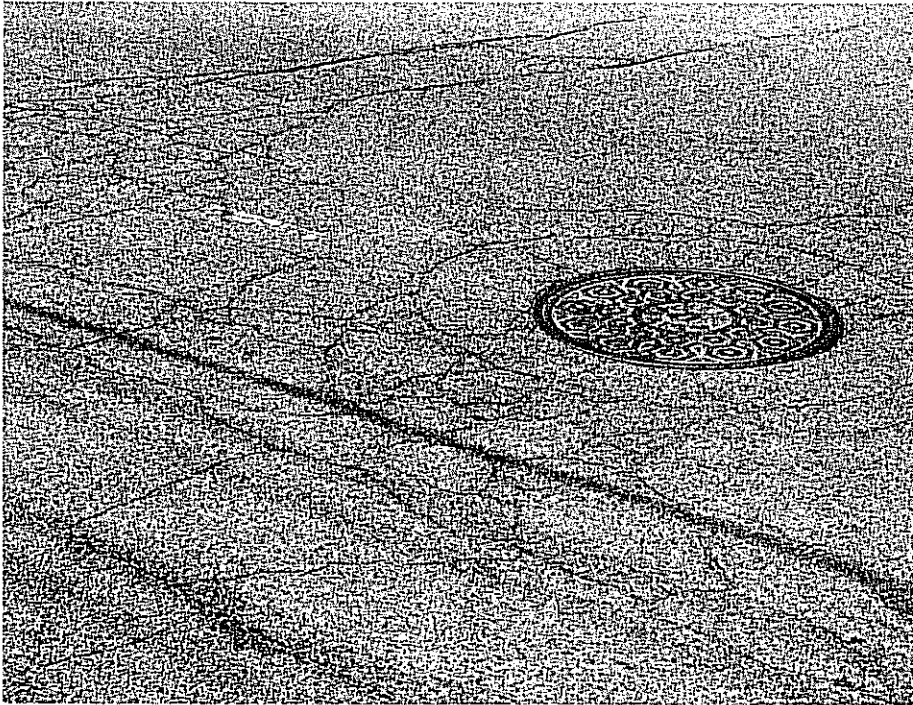


Narrow lanes making it congested.

VINE STREET



Holes in pavement and sunken curb.



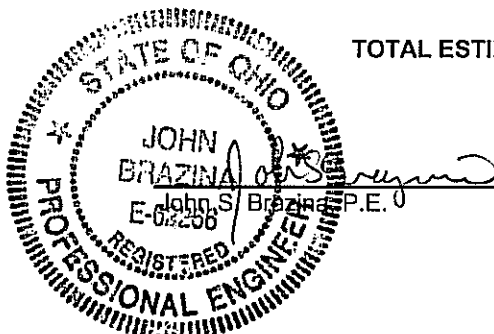
Various cracking thru out project limits.

Detailed Cost Estimate

VINE STREET - Nixon to Erkenbrecher						
OPWC Round 22 2007						TOTAL
REF.	ITEM NO.	TOTAL	UNIT	DESCRIPTION	EST. UNIT PRICE	ESTIMATED COST
ROADWAY ITEMS						
1	103.05	Lump	Sum	Contract Bond	\$25,000.00	\$25,000.00
2	Special	2	ea.	Project Signs	\$500.00	\$1,000.00
3	201	Lump	Sum	Clearing and Grubbing	\$10,000.00	\$10,000.00
4	202	260	l.f.	Fence Removed and Rused	\$60.00	\$15,600.00
5	202	5,900	s.y.	Concrete Pavement Removed	\$10.00	\$59,000.00
6	202	63	s.y.	Concrete Island Removed	\$15.00	\$937.50
7	202	1,000	l.f.	Pipe Removed	\$10.00	\$10,000.00
8	202	4	ea.	Inlet Removed	\$300.00	\$1,200.00
9	202	1	ea.	Inlet Abandoned	\$300.00	\$300.00
10	202	1	ea.	Manhole Abandoned	\$500.00	\$500.00
11	203	700	c.y.	Embankment	\$25.00	\$17,500.00
12	203	700	c.y.	Excavation	\$20.00	\$14,000.00
13	204	7,225	s.y.	Subgrade Compaction	\$2.00	\$14,450.00
14	204	40	hr.	Proof Rolling	\$50.00	\$2,000.00
15	304	1,200	c.y.	Aggregate Base	\$40.00	\$48,000.00
16	305	7,225	s.y.	Concrete Base	\$40.00	\$289,000.00
17	448	300	c.y.	Asphalt Concrete Intermediate Course, Type 1	\$125.00	\$37,500.00
18	448	300	c.y.	Asphalt Concrete Surface Course, Type 1	\$125.00	\$37,500.00
19	603	50	l.f.	Reestablish Sanitary Lateral Connection	\$100.00	\$5,000.00
20	603	125	l.f.	12" Conduit, Type H	\$100.00	\$12,500.00
21	603	300	l.f.	18" Conduit, Type B	\$100.00	\$30,000.00
22	603	250	l.f.	24" Conduit, Type B	\$100.00	\$25,000.00
23	603	175	l.f.	30" Conduit, Type B	\$250.00	\$43,750.00
24	603	175	l.f.	36" Conduit, Type B	\$350.00	\$61,250.00
25	604	6	ea.	Manhole	\$3,500.00	\$19,250.00
26	604	13	ea.	Combination Inlet Manhole (CIMH)	\$2,500.00	\$32,500.00
27	604	1	ea.	Ditch Inlet (DI)	\$1,600.00	\$1,600.00
28	604	2	ea.	Double Gutter Inlet (DGI)	\$2,000.00	\$4,000.00
29	604	1	ea.	Manhole Reconstructed to Grade	\$1,000.00	\$1,000.00
30	604	3	ea.	Manhole Adjusted to Grade Without Adjusting Rings	\$500.00	\$1,500.00
31	604	2	ea.	Double Gutter Inlet (DGI) Adjusted to Grade	\$500.00	\$1,000.00
32	605	2,600	l.f.	4 Inch Shallow Pipe Underdrain	\$5.00	\$13,000.00
33	608	13,000	s.f.	Concrete Walk, 5 Inches	\$6.50	\$84,500.00
34	608	500	s.f.	Curb Ramp	\$10.00	\$5,000.00
35	608	100	s.f.	Detectable Warning, Type B	\$10.00	\$1,000.00
36	608	100	s.f.	Detectable Warning, Type O	\$10.00	\$1,000.00
37	609	2,600	l.f.	Concrete Curb	\$20.00	\$52,000.00
38	614	Lump	Sum	Maintaining Traffic	\$60,000.00	\$60,000.00
39	616	25	mgal	Water (Dust Control)	\$10.00	\$250.00
40	619	Lump	Sum	Field Office, Type A	\$2,500.00	\$2,500.00
41	627	2,000	s.f.	Concrete Driveway	\$8.00	\$16,000.00
42	627	1,000	s.f.	Asphaltic Concrete Surface Driveway, 2 Inches	\$10.00	\$10,000.00
43	628	250	l.f.	Sawing Concrete	\$3.00	\$750.00
44	Special	50	s.f.	Retaining Wall	\$500.00	\$25,000.00
45	Special	1	ea.	Traffic Signal	\$100,000.00	\$100,000.00
46	Special	Lump	Sum	Signing and Striping	\$17,500.00	\$17,500.00
47	Special	9	ea.	Street Lighting	\$8,000.00	\$72,000.00
48	659	1,150	s.y.	Seeding and Mulching with Topsoil	\$5.00	\$5,750.00
49	712.09	7,225	s.y.	Geotextile Fabric, Type D	\$3.00	\$21,675.00
50	1125	5	ea.	Restting Existing Valve Box Complete	\$150.00	\$750.00
51	Special	5	ea.	Furnish and Install Valve Box Casting	\$250.00	\$1,250.00
52	1132	7	ea.	Furnishing and Installing Curb and Roadway Box	\$250.00	\$1,750.00

TOTAL
10% CONTINGENCY
TOTAL ESTIMATED CONSTRUCTION COST
USE

\$1,313,512.50
\$131,351.25
\$1,444,863.75
\$1,450,000.00

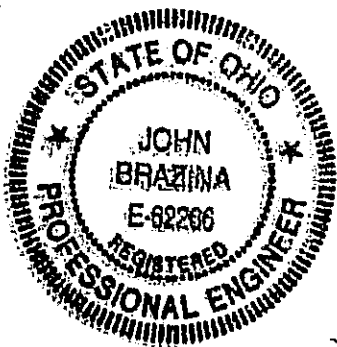


Useful Life Statement

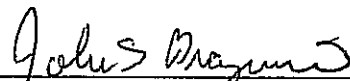
September 8, 2006

Subject: Vine Street Improvement – Nixon to Erkenbrecher
Certification of Useful Life for OPWC Projects

As required by Chapter 164-1-13 of the Ohio Administrative Code, I hereby certify that the design useful life of the subject street improvement is at least twenty (20) years.



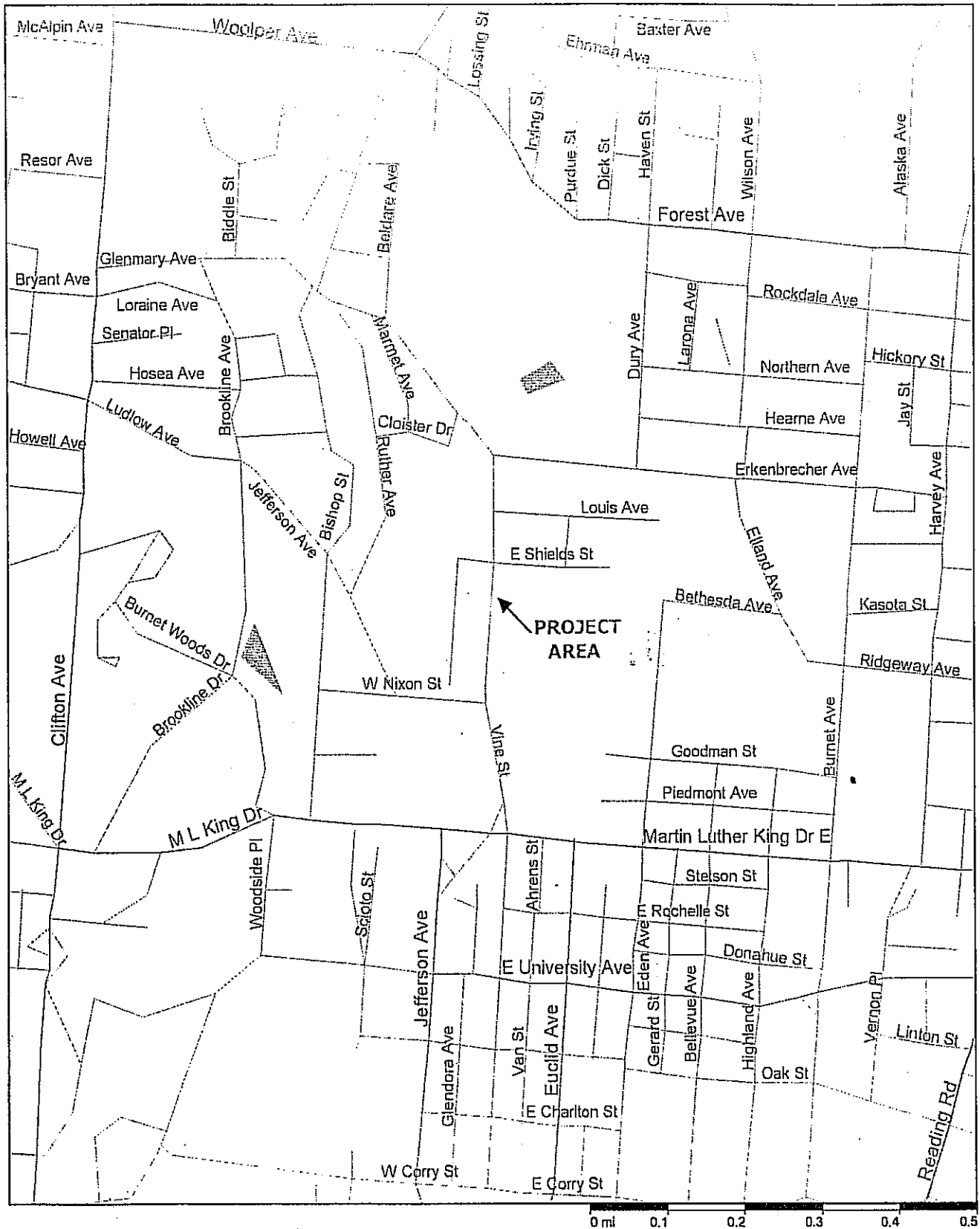
(seal)



John Brazina, P.E.
Senior Engineer
City of Cincinnati

Project Vicinity Map

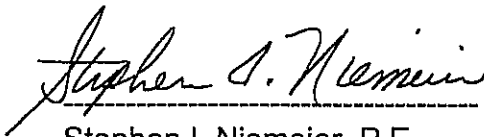
VINE ST. WIDENING NIXON ST. - ERKENBRECHER AVE.



Certified Traffic Count

CERTIFICATION OF TRAFFIC COUNT

As required by the District 2 Integrating Committee, I hereby certify that the traffic counts herein attached to the **Vine Street – Nixon to Erkenbrecker** project application are a true and accurate count done by the City of Cincinnati's Traffic Engineering Division.



Stephen I. Niemeier, P.E.
Principal Traffic Engineer



Infrastructure Condition Data

CLOSED	01/06/2005	PUB SERV	EMERGENCY SERVICE	Pothole, repair haz
CLOSED	01/06/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	01/11/2005	PUB SERV	EMERGENCY SERVICE	Pothole, repair haz
CLOSED	02/09/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	03/11/2005	DOT	DT-T-TRFPCRTNS	Sign, new/change
CLOSED	05/23/2005	PUB SERV	NOD ROW MAINTENANCE	Dead animal, 1st shift public
CLOSED	05/30/2005	PUB SERV	NOD ROW MAINTENANCE	Dead animal, 2nd shift public
CLOSED	09/12/2005	PUB SERV	STREET CLEANING	Street cleaning, row 3rd
CLOSED	01/18/2006	PUB SERV	WINTER OPERATIONS	Slippery streets, request
CLOSED	03/10/2006	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	06/26/2006	PARKS	URBAN FORESTRY	Tree, reg. hrs or during storm

3200 VINE ST CINC

CLOSED
SR04010866
CLOSED
SR05001858
CLOSED
SR05008748
CLOSED
SR05033505
CLOSED
SR06093575

12/08/2004
01/10/2005
02/11/2005
06/12/2005
08/17/2006

PUB SERV
HEALTH
PUB SERV
PUB SERV
PUB SERV

GRAFFITI
HEALTH-LITTER
TRAFFIC AIDS
TRAFFIC SERVICES BUREAU
TRAFFIC SERVICES BUREAU

5

Graffiti, removal
Mud, tracking of mud
Sign, down reg h's
Signal, traf/ped/school repair
Signal, traf/ped/school repair

0
3

CLOSED	12/09/2004	PUB SERV	ASPHALT	Street, general repair
CLOSED	01/10/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	01/26/2005	PUB SERV	EMERGENCY SERVICE	Pothole, repair hnz
CLOSED	01/28/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	02/01/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	02/09/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	05/13/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	06/01/2005	DOT	DT-T-TRFGPRTNS	Pavement markings TOS
CLOSED	06/04/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	06/20/2005	PUB SERV	EMERGENCY SERVICE	Sidewalk, repair hnz
CLOSED	06/27/2005	PUB SERV	NOD ROW MAINTENANCE	Dead animal, 1st shill private
CLOSED	09/07/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	10/10/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	02/06/2006	PUB SERV	Special Collections	Yard Waste, Special Collection
CLOSED	03/01/2006	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
SECURE	04/21/2006	DOT	DOT-TE-ELECTRICAL DESIGN	Signal, change request traffic
CLOSED	04/21/2006	DOT	DOT-TE-ELECTRICAL DESIGN	Signal, change request traffic
CLOSED	05/10/2006	PUB SERV	PS:PROP MNTNCE DEPT-PROP	Tall grass/weeds, PS property
CLOSED	05/10/2006	PARKS	URBAN FORESTRY	Tree, reg. hrs or during storm
CLOSED	06/13/2006	PUB SERV	PS:PROP MNTNCE DEPT-PROP	Tall grass/weeds, PS property
NEW	08/10/2006	PUB SERV	TRAFFIC AIDS	Sign, street sign faded
CLOSED	08/21/2006	PUB SERV	ASPHALT	Pothole, repair

6

4

CLOSED	SR05001176	CLOSED	01/06/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	SR05001360	CLOSED	01/07/2005	PUB SERV	EMERGENCY SERVICE	Pothole, repair hnz
CLOSED	SR05001568	CLOSED	01/08/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	SR05001765	CLOSED	01/10/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	SR05003812	CLOSED	01/18/2005	DOT	DOT-TE-ELECTRICAL DESIGN	Light, street light new
CLOSED	SR05014313	CLOSED	03/15/2005	PUB SERV	ASPHALT	Pothole, repair
CLOSED	SR05016955	CLOSED	03/28/2005	DOT	DOT-TE-ELECTRICAL DESIGN	Signal, new traffic
CLOSED	SR05018009	CLOSED	04/01/2005	DOT	DT-T-TRFFCPTNS	Sign, new/change
CLOSED	SR05019284	CLOSED	04/08/2005	DOT	DT-T-TRFFCPTNS	Sign, TOS new/change
CLOSED	SR05030790	CLOSED	05/31/2005	DOT	DT-T-TRFFCPTNS	Sign, TOS new/change
CLOSED	SR05052638	CLOSED	09/13/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	SR05052672	CLOSED	09/14/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	SR05053815	CLOSED	09/20/2005	PUB SERV	EMERGENCY SERVICE	Street plates, move/replace
CLOSED	SR05057454	CLOSED	10/10/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Sign, overhd repair
CLOSED	SR05057723	CLOSED	10/11/2005	DOT	DT-T-TRFFCPTNS	Sign, crosswalk sign new
INPROGRS	SR05059042	CLOSED	10/19/2005	DOT	DOT-TE-ELECTRICAL DESIGN	Signal, EDS veh progrs/sig tim
CLOSED	SR05060568	CLOSED	10/29/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	SR06020315	CLOSED	03/21/2006	PUB SERV	ASPHALT	Curbs, repair
ABAT-OW	SR06057594	CLOSED	03/17/2005	BUILD	BUILD-General Building Inspection	Building, elec prmit- NEW or C
NEW	SR06072543	CLOSED	05/23/2006	BUILD	BUILD-GBI, EXISTING	Building, elec prmit- NEW or C
NEW	SR06072545	CLOSED	05/23/2006	BUILD	BUILD-GBI, EXISTING	Building, elec prmit- NEW or C
CLOSED	SR06072839	CLOSED	05/24/2006	DOT	DOT-TE-ELECTRICAL DESIGN	Signal, change request traffic
NEW	SR06079321	CLOSED	06/19/2006	BUILD	BUILD-GBI, EXISTING	Build, permit via dir const NC
CLOSED	SR06092187	CLOSED	08/11/2006	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair

CLOSED	11/10/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	12/09/2005	CWW	CWW DEFAULT	Default, CWW
CLOSED	12/10/2005	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	12/20/2005	PUB SERV	WINTER OPERATIONS	Slippery streets, request
CLOSED	01/26/2006	PUB SERV	ASPHALT	Pothole, repair
CLOSED	02/02/2006	DOT	DOT-TE-ELECTRICAL DESIGN	Street Lights, new/change
CLOSED	02/15/2006	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
CLOSED	03/13/2006	PUB SERV	TRAFFIC SERVICES BUREAU	Signal, traf/ped/school repair
NEW	03/24/2006	PUB SERV	TRAFFIC AIDS	Sign, street sign faded
NEW	08/19/2006	PUB SERV	TRAFFIC AIDS	Sign, street sign faded

RR04010630	CLOSED	12/07/2004	PUB SERV	Special Collections	Metal Furniture, Spec Collectn
RR05000332	CLOSED	01/04/2005	PUB SERV	EMERGENCY SERVICE	Pothole, repair haz
RR05043432	CLOSED	07/27/2005	PUB SERV	Special Collections	Metal Furniture, Spec Collectn
RR05049160	CLOSED	08/25/2005	PUB SERV	CLLCITNSSRVCRCDNTRS	Trash, request for collection
RR05056912	CLOSED	10/06/2005	PUB SERV	CLLCITNSSRVCRCDNTRS	Trash, request for collection
RR05066223	CLOSED	12/06/2005	CWW	CWW DEFAULT	Default, CWW
RR05066317	CLOSED	12/07/2005	PUB SERV	WINTER OPERATIONS	Slippery streets, request haz
RR06005924	CLOSED	01/25/2006	PUB SERV	RECYCLING	Recycling, bin request
RR06080089	CLOSED	06/22/2006	PUB SERV	CLLCITNSSRVCRCDNTRS	Trash, request for collection
RR06081973	CLOSED	06/29/2006	PUB SERV	CLLCITNSSRVCRCDNTRS	Trash, request for collection

Infrastructure Safety/Health Data

Segment
ROADWAY MIDDLEBLOCK SUMMARY
DIVISION OF TRAFFIC ENGINEERING
CITY OF CINCINNATI

Roadway VINE STREET from NIXON to ERKENBRECHER

Prepared by _____ Date 9/7/2006

[illegible]

Comments: REFER TO ATTACHED DATA: 74 TOTAL ACCIDENTS IN 2 YEARS

$$\text{Accident Rate} = \text{No. Acc} \times 1,000,000 = \underline{74} \times 1,000,000 = \underline{10.01} \text{ Accidents}$$












million vehicle miles

10: VA Hospital & Vine St

Baseline

09/05/2006

Lanes, Volumes, Timings

Lane Group	 WBL	 WBR	 NBT	 NBR	 SBL	 SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		20	0	
Storage Lanes	1	0		1	0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	50
Trailing Detector (ft)	0		0	0	0	0
Turning Speed (mph)	15	9		9	15	
Satd. Flow (prot)	1770	0	1676	1425	0	1666
Flt Perm.	0.950					0.917
Satd. Flow (perm)	1770	0	1676	1425	0	1537
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)				97		
Volume (vph)	69	0	249	115	94	631
Confl. Peds. (#/hr)	16	10				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	77	0	277	128	0	805
Turn Type				Perm	Perm	
Protected Phases	8		2			6
Permitted Phases				2	6	
Detector Phases	8		2	2	6	6
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	22.0		22.0	22.0	22.0	22.0
Total Split (s)	28.0	0.0	62.0	62.0	62.0	62.0
Total Split (%)	31%	0%	69%	69%	69%	69%
Yellow Time (s)	3.0		4.0	4.0	4.0	4.0
All-Red Time (s)	3.0		2.0	2.0	2.0	2.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max		Max	Max	Max	Max
Lane Grp Cap (vph)	492		1099	968		1008
v/s Ratio Prot	0.04		0.17			
v/s Ratio Perm				0.09		0.52
Critical LG?	Yes					Yes
Act Effct Green (s)	25.0		59.0	59.0		59.0
Actuated g/C Ratio	0.28		0.66	0.66		0.66
v/c Ratio	0.16		0.25	0.13		0.80
Uniform Delay, d1	24.5		6.4	1.3		11.2
Percentile Delay	25.0		6.6	2.0		13.2
Percentile LOS	C		A	A		B




10: VA Hospital & Vine St

Baseline











09/05/2006

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 67 (74%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Pretimed
Total Lost Time: 6
Sum of Critical v/s Ratios: 0.57
Intersection v/c Ratio: 0.61
Intersection Percentile Signal Delay: 11.3
Intersection Percentile LOS: B

Splits and Phases: 10: VA Hospital & Vine St




 02	
62s	
 06	 08
62s	28s

Lanes, Volumes, Timings

Lane Group	 WBL	 WBR	 NBT	 NBR	 SBL	 SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		20	0	
Storage Lanes	1	0		1	0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	50
Trailing Detector (ft)	0		0	0	0	0
Turning Speed (mph)	15	9		9	15	
Satd. Flow (prot)	1770	0	1676	1425	0	1666
Flt Perm.	0.950					0.857
Satd. Flow (perm)	1770	0	1676	1425	0	1437
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)				97		
Volume (vph)	103	0	370	171	140	938
Confl. Peds. (#/hr)	16	10				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	114	0	411	190	0	1198
Turn Type				Perm	Perm	
Protected Phases	8		2			6
Permitted Phases				2	6	
Detector Phases	8		2	2	6	6
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	22.0		22.0	22.0	22.0	22.0
Total Split (s)	28.0	0.0	62.0	62.0	62.0	62.0
Total Split (%)	31%	0%	69%	69%	69%	69%
Yellow Time (s)	3.0		4.0	4.0	4.0	4.0
All-Red Time (s)	3.0		2.0	2.0	2.0	2.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max		Max	Max	Max	Max
Lane Grp Cap (vph)	492		1099	968		942
v/s Ratio Prot	0.06		0.25			
v/s Ratio Perm				0.13		0.83
Critical LG?	Yes					Yes
Act Effct Green (s)	25.0		59.0	59.0		59.0
Actuated g/C Ratio	0.28		0.66	0.66		0.66
v/c Ratio	0.23		0.37	0.20		1.27
Uniform Delay, d1	25.1		7.1	2.8		15.5
Percentile Delay	25.6		7.3	3.1		127.7
Percentile LOS	C		A	A		F

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 67 (74%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Pretimed
Total Lost Time: 6
Sum of Critical v/s Ratios: 0.90
Intersection v/c Ratio: 0.96
Intersection Percentile Signal Delay: 83.4
Intersection Percentile LOS: F

Splits and Phases: 10: VA Hospital & Vine St












 02	
62s	
 06	 08
62s	28s

10: VA Hospital & Vine St

Baseline

09/05/2006

Lanes, Volumes, Timings

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Satd. Flow (prot)	1711	1531	3260	0	1711	3421
Flt Perm.	0.950				0.398	
Satd. Flow (perm)	1711	1522	3260	0	717	3421
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		41	190			
Volume (vph)	103	37	370	171	140	938
Confl. Peds. (#/hr)	16	10				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	114	41	601	0	156	1042
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Detector Phases	8	8	2		6	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.5	21.5	21.5		21.5	21.5
Total Split (s)	21.5	21.5	38.5	0.0	38.5	38.5
Total Split (%)	36%	36%	64%	0%	64%	64%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max		Max	Max
Lane Grp Cap (vph)	528	498	2006		424	2024
v/s Ratio Prot	0.07		0.18			0.30
v/s Ratio Perm		0.03			0.22	
Critical LG?	Yes					Yes
Act Effct Green (s)	18.5	18.5	35.5		35.5	35.5
Actuated g/C Ratio	0.31	0.31	0.59		0.59	0.59
v/c Ratio	0.22	0.08	0.30		0.37	0.51
Uniform Delay, d1	15.4	0.0	3.9		6.4	7.2
Percentile Delay	15.8	5.9	4.1		7.1	7.4
Percentile LOS	B	A	A		A	A

10: VA Hospital & Vine St

Baseline

09/05/2006

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 24 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Total Lost Time: 6




Sum of Critical v/s Ratios: 0.37

Intersection v/c Ratio: 0.41











Intersection Percentile Signal Delay: 6.8

Intersection Percentile LOS: A

Splits and Phases: 10: VA Hospital & Vine St

 ø2	
38:5 s	
 ø6	 ø8
38:5 s	21:5 s

Lanes, Volumes, Timings










						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50		50	50
Trailing Detector (ft)	0		0		0	0
Turning Speed (mph)	15	9		9	15	
Satd. Flow (prot)	1770	0	3157	0	0	1676
Flt Perm.	0.950					0.997
Satd. Flow (perm)	1770	0	3157	0	0	1671
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			15			
Volume (vph)	71	0	809	51	3	622
Confl. Peds. (#/hr)	2	8		10	10	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	79	0	956	0	0	694
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phases	8		2		6	6
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	22.0		22.0		22.0	22.0
Total Split (s)	28.0	0.0	62.0	0.0	62.0	62.0
Total Split (%)	31%	0%	69%	0%	69%	69%
Yellow Time (s)	3.0		4.0		4.0	4.0
All-Red Time (s)	3.0		2.0		2.0	2.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Coord		Coord	Coord
Lane Grp Cap (vph)	216		2564			1355
v/s Ratio Prot	0.04		0.30			
v/s Ratio Perm						0.42
Critical LG?	Yes					Yes
Act Effct Green (s)	12.1		74.8			74.8
Actuated g/C Ratio	0.13		0.83			0.83
v/c Ratio	0.33		0.36			0.50
Uniform Delay, d1	36.3		2.2			2.7
Percentile Delay	34.6		1.8			1.9
Percentile LOS	C		A			A

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 67 (74%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Total Lost Time: 6
Sum of Critical v/s Ratios: 0.46
Intersection v/c Ratio: 0.49
Intersection Percentile Signal Delay: 3.4
Intersection Percentile LOS: A

Splits and Phases: 10: VA Hospital & Vine St




↑ Ø2	
62s	
↓ Ø6	↙ Ø8
62s	28s

Lanes, Volumes, Timings












						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	9	9	9	9
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50		50	50
Trailing Detector (ft)	0		0		0	0
Turning Speed (mph)	15	9		9	15	
Satd. Flow (prot)	1770	0	3157	0	0	1676
Flt Perm.	0.950					0.995
Satd. Flow (perm)	1770	0	3157	0	0	1668
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)			15			
Volume (vph)	106	0	1202	76	4	924
Confl. Peds. (#/hr)	2	8		10	10	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	118	0	1420	0	0	1031
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phases	8		2		6	6
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	22.0		22.0		22.0	22.0
Total Split (s)	28.0	0.0	62.0	0.0	62.0	62.0
Total Split (%)	31%	0%	69%	0%	69%	69%
Yellow Time (s)	3.0		4.0		4.0	4.0
All-Red Time (s)	3.0		2.0		2.0	2.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Coord		Coord	Coord
Lane Grp Cap (vph)	248		2508			1323
v/s Ratio Prot	0.07		0.45			
v/s Ratio Perm						0.62
Critical LG?	Yes					Yes
Act Effct Green (s)	13.8		73.2			73.2
Actuated g/C Ratio	0.15		0.81			0.81
v/c Ratio	0.43		0.55			0.76
Uniform Delay, d1	35.6		3.4			5.0
Percentile Delay	33.7		3.7			4.8
Percentile LOS	C		A			A

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 67 (74%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Total Lost Time: 6
Sum of Critical v/s Ratios: 0.68
Intersection v/c Ratio: 0.73
Intersection Percentile Signal Delay: 5.5
Intersection Percentile LOS: A

Splits and Phases: 10: VA Hospital & Vine St

 02	
62 s	
 06	 08
62 s	28 s

Lanes, Volumes, Timings

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	75	
Storage Lanes	1	1		0	1	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Satd. Flow (prot)	1711	1531	3390	0	1711	3421
Flt Perm.	0.950				0.113	
Satd. Flow (perm)	1711	1523	3390	0	203	3421
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		51	19			
Volume (vph)	106	73	1202	76	4	924
Confl. Peds. (#/hr)	2	8		10	10	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	118	81	1420	0	4	1027
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Detector Phases	8	8	2		6	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.5	21.5	21.5		21.5	21.5
Total Split (s)	21.5	21.5	38.5	0.0	38.5	38.5
Total Split (%)	36%	36%	64%	0%	64%	64%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max		Max	Max
Lane Grp Cap (vph)	528	505	2014		120	2024
v/s Ratio Prot	0.07		0.42			0.30
v/s Ratio Perm		0.05			0.02	
Critical LG?	Yes		Yes			
Act Effct Green (s)	18.5	18.5	35.5		35.5	35.5
Actuated g/C Ratio	0.31	0.31	0.59		0.59	0.59
v/c Ratio	0.22	0.16	0.71		0.03	0.51
Uniform Delay, d1	15.4	5.4	8.4		5.0	7.1
Percentile Delay	15.9	8.0	5.9		5.5	7.3
Percentile LOS	B	A	A		A	A

Baseline

09/05/2006

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 24 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Total Lost Time: 6




Sum of Critical v/s Ratios: 0.49

Intersection v/c Ratio: 0.54












Intersection Percentile Signal Delay: 6.9

Intersection Percentile LOS: A

Splits and Phases: 10: VA Hospital & Vine St

 ø2	
38.5 s	
 ø6	 ø8
38.5 s	21.5 s

Lanes, Volumes, Timings

						
Lane Group	WBL	WBR	NBL	NBR	SEL	SER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9
Grade (%)	0%		0%		0%	
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	1	0	0	1	0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	10	15	35	9	15	35
Satd. Flow (prot)	1593	1425	3090	0	1593	2508
Flt Perm.	0.950		0.950		0.950	
Satd. Flow (perm)	1593	1425	3090	0	1593	2508
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		36				259
Volume (vph)	254	520	965	0	124	233
Confl. Peds. (#/hr)	2		2			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%		0%	
Lane Group Flow (vph)	282	578	1072	0	138	259
Turn Type	Pm+Ov			Prot		
Protected Phases	8	1	2		1	6
Permitted Phases		8				
Detector Phases	8	1	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	23.0	10.0	22.0		10.0	22.0
Total Split (s)	26.0	23.0	41.0	0.0	23.0	64.0
Total Split (%)	29%	26%	46%	0%	26%	71%
Yellow Time (s)	4.0	3.6	3.6		3.6	3.6
All-Red Time (s)	3.0	2.4	2.4		2.4	2.4
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	Max	Max	Max		Max	Max
Lane Grp Cap (vph)	407	746	1305		354	1783
v/s Ratio Prot	0.18	0.17	0.35		0.09	0.10
v/s Ratio Perm		0.22				
Critical LG?		Yes	Yes			
Act Effct Green (s)	23.0	46.0	38.0		20.0	61.0
Actuated g/C Ratio	0.26	0.51	0.42		0.22	0.68
v/c Ratio	0.69	0.77	0.82		0.39	0.15
Uniform Delay, d1	30.3	16.5	23.0		29.8	0.0
Percentile Delay	32.2	18.9	25.4		30.5	0.7
Percentile LOS	C	B	C		C	A

Baseline

09/05/2006

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBL and 6:SER, Start of Green, Master Intersection

Natural Cycle: 65

Control Type: Pretimed

Total Lost Time: 6





Sum of Critical v/s Ratios: 0.74

Intersection v/c Ratio: 0.80












Intersection Percentile Signal Delay: 22.2

Intersection Percentile LOS: C

Splits and Phases: 3: Erkenbrecher & Vine St

 02	 01	
41s	23s	
 06		 08
64s		26s

Lanes, Volumes, Timings

Lane Group	 WBL	 WBR	 NBL	 NBR	 SEL	 SER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	9	9	9	9
Grade (%)	0%		0%		0%	
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	1	0	0	1	0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	10	15	35	9	15	35
Satd. Flow (prot)	1593	1425	3090	0	1593	2508
Flt Perm.	0.950		0.950		0.950	
Satd. Flow (perm)	1593	1425	3090	0	1593	2508
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		6				220
Volume (vph)	377	773	1434	0	184	346
Confl. Peds. (#/hr)	2		2			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%		0%	
Lane Group Flow (vph)	419	859	1593	0	204	384
Turn Type	Pm+Ov				Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8				
Detector Phases	8	1	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	23.0	10.0	22.0		10.0	22.0
Total Split (s)	26.0	23.0	41.0	0.0	23.0	64.0
Total Split (%)	29%	26%	46%	0%	26%	71%
Yellow Time (s)	4.0	3.6	3.6		3.6	3.6
All-Red Time (s)	3.0	2.4	2.4		2.4	2.4
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	Max	Max	Max		Max	Max
Lane Grp Cap (vph)	407	731	1305		354	1771
v/s Ratio Prot	0.26	0.26	0.52		0.13	0.15
v/s Ratio Perm		0.34				
Critical LG?		Yes	Yes			
Act Effct Green (s)	23.0	46.0	38.0		20.0	61.0
Actuated g/C Ratio	0.26	0.51	0.42		0.22	0.68
v/c Ratio	1.03	1.18	1.22		0.58	0.22
Uniform Delay, d1	33.5	21.8	26.0		31.2	2.1
Percentile Delay	77.9	102.4	117.9		32.0	2.2
Percentile LOS	E	F	F		C	A

Baseline

09/05/2006

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBL and 6:SER, Start of Green, Master Intersection

Natural Cycle: 100

Control Type: Pretimed

Total Lost Time: 6





Sum of Critical v/s Ratios: 1.12

Intersection v/c Ratio: 1.20












Intersection Percentile Signal Delay: 91.3

Intersection Percentile LOS: F

Splits and Phases: 3: Erkenbrecher & Vine St

 02	 01	
41s	23s	
 06		 08
64s		26s

Lanes, Volumes, Timings

Lane Group	 WBL	 WBR	 NBT	 NBR	 SBL	 SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	2		0	1	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Satd. Flow (prot)	1770	2787	3447	0	1770	3539
Flt Perm.	0.950				0.068	
Satd. Flow (perm)	1770	2787	3447	0	127	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		41	39			
Volume (vph)	377	773	1434	291	184	346
Confl. Peds. (#/hr)	2			2	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Lane Group Flow (vph)	419	859	1916	0	204	384
Turn Type	Pm+Ov			Pm+Pt		
Protected Phases	8	1	2		1	6
Permitted Phases		8			6	
Detector Phases	8	1	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	21.5	12.0	21.5		12.0	21.5
Total Split (s)	27.0	14.0	59.0	0.0	14.0	73.0
Total Split (%)	27%	14%	59%	0%	14%	73%
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	Max	Max	Max		Max	Max
Lane Grp Cap (vph)	425	1084	1947		270	2477
v/s Ratio Prot	0.24	0.09	0.55		0.08	0.11
v/s Ratio Perm		0.21			0.45	
Critical LG?	Yes	Yes	Yes			
Act Effct Green (s)	24.0	38.0	56.0		70.0	70.0
Actuated g/C Ratio	0.24	0.38	0.56		0.70	0.70
v/c Ratio	0.99	0.79	0.98		0.76	0.16
Uniform Delay, d1	37.8	26.1	21.1		30.5	5.0
Percentile Delay	68.4	26.6	33.8		37.8	5.1
Percentile LOS	E	C	C		D	A

Baseline

09/05/2006

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 90

Control Type: Pretimed

Total Lost Time: 9





Sum of Critical v/s Ratios: 0.88

Intersection v/c Ratio: 0.97

Intersection Percentile Signal Delay: 33.3

Intersection Percentile LOS: C

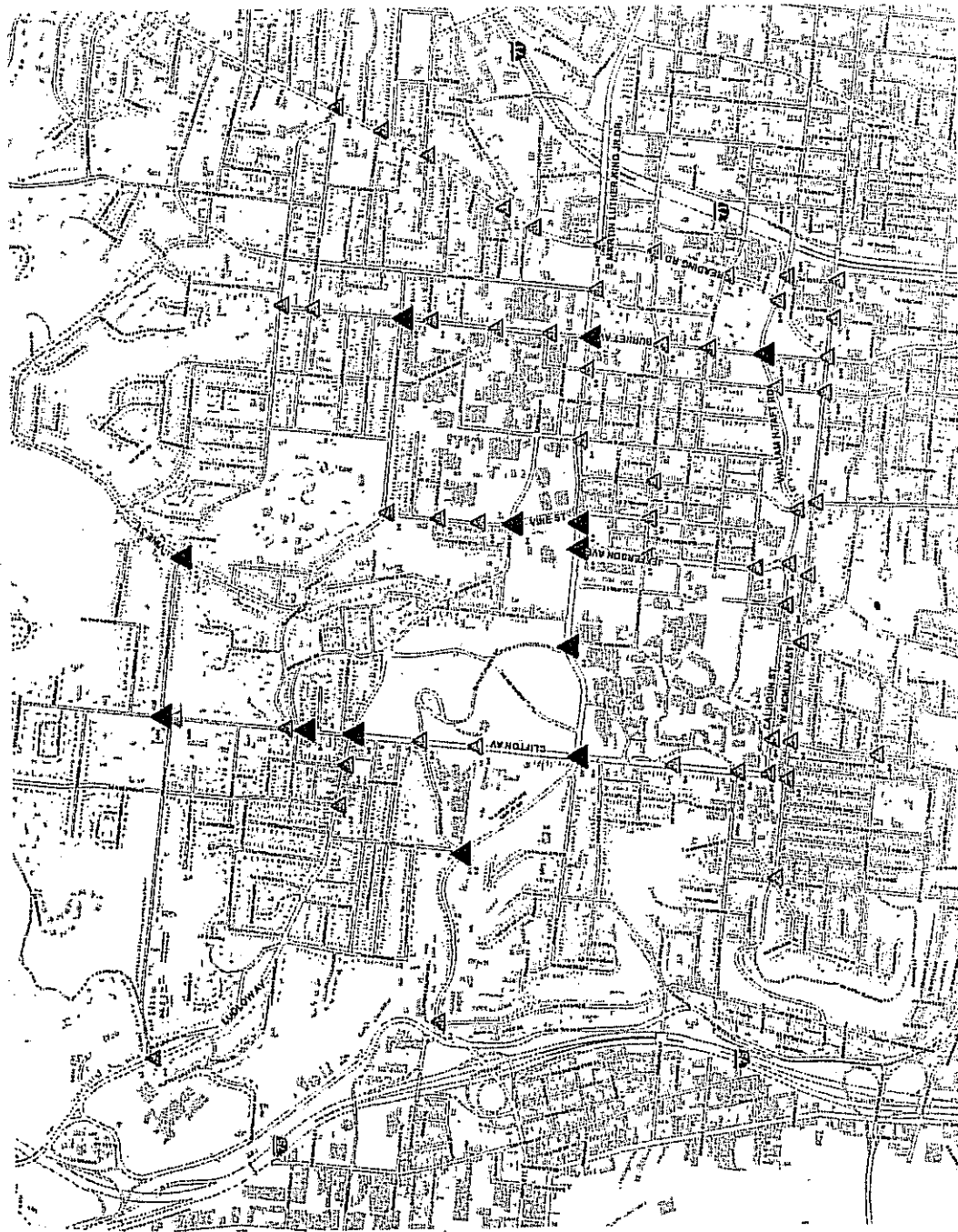
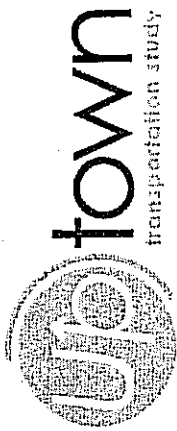
Splits and Phases: 6: Erkenbrecher & Vine St

 ø2	 ø1	
59s	14s	
 ø6	 ø8	
73s	27s	

Traffic Signal System Evaluation

Existing

Congested Intersections



Legend

Peak Hour Turning Movement
Count Location (67)

▲ LOS A, B or C

▲ LOS D, E or F

April 20, 2005

2,000 1,000 0

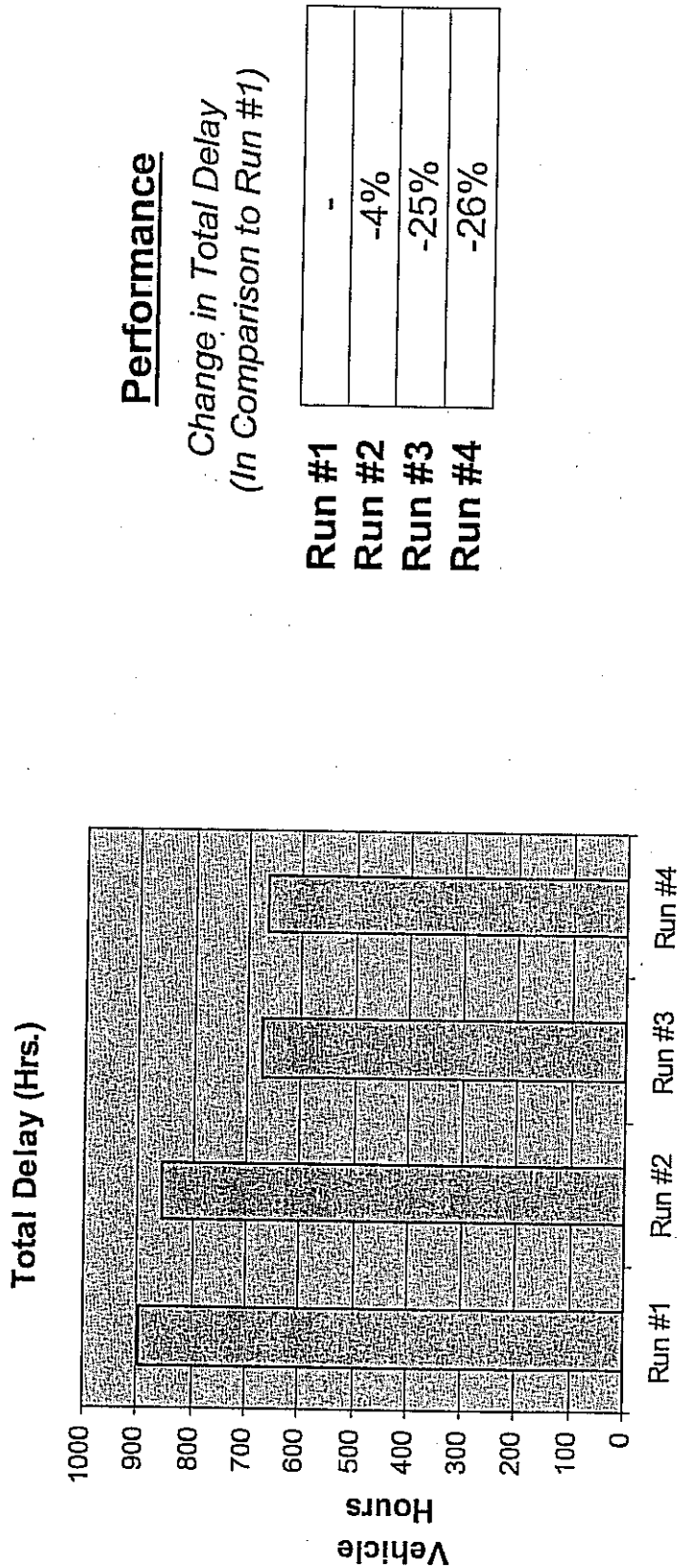
Feet

Measures of Performance

■ SYNCHRO Runs

- Run # 1- Existing Signal Groupings
- Run #2 – Existing signal groups with modified timing to minimize stops and delay
- Run #3 – Existing signal groups with two new signalized intersections on Martin Luther King Jr Drive with existing timing; and
- Run #4 – Combine all existing signal groups plus the two new signalized intersections into one system with modified timing to minimize stops and delay

Measures of Performance - Total Delay





September 1, 2006

Adventure • Conservation • Education

Mr. Bill Brayshaw, County Engineer
10480 Burlington Road
Cincinnati, OH 45231

Dear Mr. Brayshaw:

The Cincinnati Zoo & Botanical Garden supports the efforts of the City of Cincinnati in their plans for roadway improvements along Vine Street between Martin Luther King and Erkenbrecher.

The Vine Street widening project is critical to the future business development of the Cincinnati Zoo, Cincinnati Children's Medical Center and the U.S. Veterans Hospital who will ultimately share a newly created parking lot at the intersection of Vine and Erkenbrecher. The parking has freed up much needed development space at the Cincinnati Zoo allowing for the construction of a Education Center partnering with the Cincinnati Public Schools which will create 15 new jobs. It also will allow the construction of a dry lab at the VA Hospital adding construction and 40 permanent jobs. The Cincinnati Children's Medical Center has a facility under construction which will add up to 1000 jobs by the end of 2008.

The widened Vine Street project will allow for safe and efficient access to each of these facilities as well as the ability for the Zoo to create a new entry village, which was the original historical entrance dating back to 1892. The Zoo's desire to create a gateway to that new entry along Vine Street is important for business growth, long-term health and viability of the Zoo. Without the realignment and widening, the ability for the Zoo to move forward on the infrastructure project is gone. The roadway improvements are a critical link to allow the future development, growth and vitality of the Zoo campus.

The total economic impact of the Cincinnati Zoo in this area is \$88.4 million. This includes a household earnings impact of over \$30 million. The total impact on employment in Greater Cincinnati is more than 1,200 jobs. Together, these economic activities generated nearly \$2.7 million annually in local sales, earnings, and property tax revenue. This includes more than \$700,000 for Hamilton County and the City of Cincinnati in sales and earnings taxes, and another \$1.2 million in property taxes for Hamilton County jurisdictions. When the total economic impact of \$88.4 million is compared with the Zoo's spending of \$23.0 million for operations and construction, it results in an overall economic multiplier of 3.84, a number that very few local enterprises can match.

Gregg Hudson, President & CEO
Cincinnati Zoo & Botanical Garden